

U.S. Serial No. 10/822,046

Docket No. 1232-5376

Amendments to the Claims

For the Examiner's convenience, this Amendment includes the text of all claims under examination, a parenthetical expression for each claim to indicate the status of the claim, and markings to show changes relative to the immediate prior version of each currently amended claim.

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 1-7 to read as follows, and add the following new claims 8-15.

Listing of Claims:

1. (Currently Amended): A gas flow measurement apparatus that measures flow of gas emitted from ~~an EUV light source in~~ a light source chamber that accommodates an the EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving ~~that receives~~ light emitted from the EUV light source; ~~and~~

~~introduced into the gas flow measurement apparatus;~~

an orifice including an opening; and

a measurement chamber connecting to a space that accommodates the absorber

via the opening,

wherein said opening of the orifice is provided outside of an optical path of the light

emitted from the EUV light.

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2. (Currently Amended): A gas flow measurement apparatus that measures flow of gas emitted from a light source chamber that accommodates an EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

~~A gas flow measurement apparatus according to claim 1,~~ wherein said absorber has a speed of gas emitted per a unit area due to light emitted from the EUV light source is $1\text{E-}7$ ($\text{Pa} \cdot \text{m}^3/\text{s} \cdot \text{W} \cdot \text{cm}^2$) or smaller.

3. (Currently Amended): A gas flow measurement apparatus that measures flow of gas emitted from a light source chamber that accommodates an EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

~~A gas flow measurement apparatus according to claim 1,~~ wherein said absorber is made of ~~copper~~ copper or silicon.

4. (Currently Amended): A gas flow measurement apparatus that measures flow of gas emitted from a light source chamber that accommodates an EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

wherein said absorber is made of copper or silicon, and

~~A gas flow measurement apparatus according to claim 3,~~ wherein said absorber has a surface that has been made approximately flat by mechanical polishing or electropolishing.

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5. (Currently Amended): A gas flow measurement apparatus that measures flow of gas emitted from a light source chamber that accommodates an EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

~~A gas flow measurement apparatus according to claim 1,~~ wherein said absorber is made of single crystal silicon, and forms an optical irradiation surface due to cracks along a cleavage plane in the crystal.

6. (Currently Amended): A gas flow measurement apparatus that measures flow of gas emitted from a light source chamber that accommodates an EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

~~A gas flow measurement apparatus according to claim 1,~~ wherein said absorber includes a cooling mechanism.

7. (Currently Amended): A gas flow measuring method that measures a flow of gas emitted from ~~the EUV light source~~ a light source chamber that accommodates a EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from ~~an EUV light source in a the light source chamber that accommodates the EUV light source,~~ said gas flow measurement apparatus comprising:

an absorber receiving that receives light emitted from the EUV light source; and ~~introduced into the gas flow measurement apparatus~~

an orifice including an opening; and

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a measurement chamber connecting to a space that accommodates the absorber via the orifice,

wherein said opening of the orifice is provided outside of an optical path.

8. (New): A gas flow measurement apparatus that measures flow of gas emitted from a light source chamber that accommodates an EUV light source, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source;

an absorbing chamber that accommodates the absorber;

an orifice including an opening; and

a measurement chamber that is connected to the absorbing chamber via the opening of the orifice.

9. (New): A gas flow measurement apparatus according to claim 8, wherein said opening of the orifice is provided outside of an optical path of the light emitted from the EUV light.

10. (New): A gas flow measuring method that measures a flow of gas emitted from a light source chamber that accommodates an EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from the light source chamber, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

wherein said absorber has a speed of gas emitted per a unit area due to light emitted from the EUV light source is $1\text{E-}7$ ($\text{Pa} \cdot \text{m}^3/\text{s} \cdot \text{W} \cdot \text{cm}^2$) or smaller.

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11. (New): A gas flow measuring method that measures a flow of gas emitted from a light source chamber that accommodates an EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from the light source chamber, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,
wherein said absorber is made of ~~copper~~ copper or silicon.

12. (New): A gas flow measuring method that measures a flow of gas emitted from a light source chamber that accommodates an EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from the light source chamber, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source, wherein said absorber is made of copper or silicon, and

wherein said absorber has a surface that has been made approximately flat by mechanical polishing or electropolishing.

13. (New): A gas flow measuring method that measures a flow of gas emitted from a light source chamber that accommodates an EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from the light source chamber, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source, wherein said absorber is made of single crystal silicon, and forms an optical irradiation surface due to cracks along a cleavage plane in the crystal.

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14. (New): A gas flow measuring method that measures a flow of gas emitted from a light source chamber that accommodates an EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from the light source chamber, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source,

wherein said absorber includes a cooling mechanism.

15. (New): A gas flow measuring method that measures a flow of gas emitted from a light source chamber that accommodates an EUV light source using a gas flow measurement apparatus that measures flow of gas emitted from the light source chamber, said gas flow measurement apparatus comprising:

an absorber receiving light emitted from the EUV light source;

an absorbing chamber that accommodates the absorber;

an orifice including an opening; and

a measurement chamber that is connected to the absorbing chamber via the opening of the orifice.